said supervisory unit comprises an electrically powered display device in which said screen is incorporated and means for turning said display device on and off; and

the operating system of said supervisory unit is perably configured to turn said display device on and to display said message if the status information is received when said display device is turned off.

a9 cancel.

19. (Amended) The system of claim 17 in which:

the operating system of said supervisory unit comprises an electrically operated display device in which said screen is incorporated; and the operating system of said supervisory unit is operably configured to display said message when said display device is subsequently turned on if said status information is received when the display device is turned off.

Please enter the following new Claim 20:

sub B5

20. (New) The system of claim 17, wherein:

the operating system of said supervisory unit comprises an electrically operated display device in which said screen is incorporated;

said status information has an associated priority; and

the operating system of said supervisory unit is operably configured to turn on said display device and to display said message based on said associated priority having a predetermined value.

a10

REMARKS

Claims 1-19 were pending in the above-identified application. Claims 1-19 were rejected. Initially, Applicants submit that the specification has been amended to correct Applicants claim to the benefit of earlier filed related applications. No new matter was added to

the specification. In addition, with this amendment, claims 1-19 are amended to place these claims in a condition for allowance, and claim 20 has been added. Accordingly, Applicants respectively request consideration of claims 1-20, which are now pending.

In accordance with 35 U.S.C. § 120 and MPEP 201.11, Applicants initially submit that specification has been amended to include the above-identified references to related patent applications, which disclose an appliance having multimodes of operation, including a TV mode and a CD or coach mode. Applicants also submit that this Application and the above-identified related patent applications were filed before the patenting or abandonment of any earlier filed related patent application. In accordance with the requirements of 35 U.S.C. § 120, Applicants further submit that an amendment is or will be filed for each of the above-identified related patent applications to request that a specific reference to earlier filed related patent applications appear as the first paragraph of the respective specification following the title of the respective application. Accordingly, Applicants request that the Examiner acknowledge that this Application is entitled to the benefit of the earlier filing date of each related patent applications.

I. Objection To Claims

The Examiner objected to Claim 1 due to an alleged informality in the phrase "a facility physically removed from the appliance." Applicants have amended Claim 1 to correct for this alleged informality by substituting the term "remote" for "removed." Accordingly, Applicants request the removal of this objection.

II. Indefiniteness Rejection of Claims Under 35 USC § 112

The Examiner rejected claims 1, 12, 14, and 15 under 35 U.S.C. §112, second paragraph, as being indefinite because the phrase "The combination of" purportedly has insufficient

antecedent basis. Applicants have amended claims 1, 12, 14, and 15 as suggested by the Examiner to correct for the lack of antecedent basis informality and request that the rejection to these claims be withdrawn.

III. Anticipation Rejection of Claims Under 35 USC §§ 102(e).

The Examiner rejected claims 1-6 and 9-19, of which claims 1, 12-15, and 17 are independent, under 35 U.S.C. 102(e) as purportedly being anticipated by Jeon et al., US Patent No. 5.822,012. Applicant respectfully traverses this rejection and request withdrawal of the same.

The Examiner argues that Jeon teaches all the limitations of claim 1, including means for monitoring the performance of the appliance. Applicants respectively disagree. Jeon does not teach the structures disclosed in the application for performing this means-plus-function limitation. *See In re Donaldson Co.*, 16 F.3d 1189, 1194-95ed. Cir. 1994) (holding that the structure disclosed in the specification corresponding to the means-plus-function limitation cannot be disregarded by the PTO when rendering a patentability determination.)

Applicants teach that the means for monitoring the performance of the appliance in the system includes an integrated unit 26 that has a controller or operating system 56 which includes an appliance control, supervision, and feedback interface 78 linked to a power line modem 82. Applicants further teach that the means for monitoring the performance of the appliance includes a power line modem 86, sensors 162 and a microprocessor 164 all located in the appliance for, among other functions, communicating readings of the sensors to the controller or operating system 56 of the integrated unit 26 for further diagnostic processing (e.g., detecting a defective heating element of kitchen range 24 of Fig. 3). (*See* Application, at pg. 6 line 24-29; pg. 7 lines

1-5, 11-17; pg. 8 lines 11-15; pg. 9 lines 21-26; pg. 11 lines 1-3; pg. 11 line 17 - pg. 12 line 20; Figs 2-4).

Furthermore, in one implementation consistent with methods and systems of the present invention, Applicants teach that the microprocessor 164 is capable of monitoring the performance of the appliance by detecting the status of an element of the appliance (e.g., defective heating element of kitchen range 24 of Fig. 3) and of transmitting a diagnostic message indicative of the status through the power line modem 86 to the power line modem 82 of the integrated unit 26. (Application, at pg. 11 line 17- pg. 12 line 20; Figs. 2-4). Applicants further teach that the integrated unit 26 in this implementation may have a phone modem 82 and that the integrated unit 26 sends the diagnostic message via the phone modem 82 to a service/repair center designated by a user. (Application, at pg. 12 lines 1-20; Figs. 2-4). Applicants also teach that the service/repair center personnel is able to interrogate and obtain additional information from the system pertinent to the problem corresponding to the diagnostic message once the connection between the system and the service/repair center has been established. (Application, at pg. 12 lines 9-11).

In another implementation, Applicants teach the means for monitoring the performance the appliance may include having the integrated unit 26 periodically collect data indicative of the status of the appliance (e.g., operating temperature of a refrigerator), compare the data to reference data to identify a particular problem with the appliance (e.g., a loss of refrigerant or a loose belt of the refrigerator), and transmit the discovered problem as a diagnostic message to the service/repair center. (Application, at pg. 13 line 23 - pg. 14 line 13; Figs. 2-4, 12). Applicants disclose that this implementation, which is consistent with methods and systems of the present

invention, allows service/repair personnel to identify parts, tools, etc. needed to repair the problem without having to make multiple, time consuming and expensive trips to the site of the appliance.

Regarding claim 1, Applicants claim a system that includes "an appliance," "means for monitoring the performance of said appliance," and "means for transmitting data indicative of the status of said appliance from said monitoring means to a facility physically remote from the appliance and the appliance monitoring means." Independent claims 12-15 and 17 have similar limitations.

Jeon discloses a home automation apparatus that uses a digital television receiver to remotely control an appliance in the home, such as remote commands for "turning on the air conditioning, heating up the hot tub, or turning on the coffee pot." (See Jeon, Abstract; Col. 2 lines 25-30, 58-63; Fig. 1). Jeon further discloses that the home automation apparatus has a sensor input unit 60 that receives signals from various sensing devices 90 for detecting the temperature of the home, leakage of gas in the home, a fire in the home, or an intruder in the home. (See Jeon, Abstract; Col. 2 lines 49-56). Thus, Jeon teaches that the system has sensors for detecting and informing a user of emergency problems in the home. But Jeon fails to teach or suggest that the sensing devices are incorporated into or connected through power line modems to an appliance (e.g., air-conditioner, boiler, rice cooker, etc.) for monitoring the performance of the appliance or for transmitting data indicative of the status of the appliance as taught and claimed by the Applicants. Accordingly, Applicants request that the rejection to independent claims 1, 12-15 and 17 be withdrawn.

Claims 2-11 depend from independent claim 1 and should be allowed for at least the same reasons as claim 1. Claim 16 depends from independent claim 15 and should be allowed for at least the same reasons as claim 15. Claims 18-19 depend from independent claim 17 and should be allowed for at least the same reasons as claim 17. Accordingly, Applicants request that the rejection to these claims be withdrawn.

IV. Obviousness Rejection of Claims Under 35 USC § 103(a)

The Examiner rejected claims 7-8 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Jeon in view of Allport, US Patent No. 6,097,441. Applicant respectfully traverses this rejection and requests withdrawal of the same.

Applicants submit that Allport is an improper reference. Allport was filed on 31 December 1997. Applicants are entitled under 35 U.S.C. § 119 to the benefit of the earlier filing date of provisional application No. 60/052,703 filed 16 July 1997 and entitled "INTEGRATED UNITS WITH DIAGNOSTIC CAPABILITIES." Applicants have amended the specification to correctly identify the priority claim to provisional application No. 60/052,703 and will submit a substitute declaration to support the priority claim. Accordingly, Applicants request the removal of the rejection to claims 7 and 8.

V. Newly Added Claim

Applicants respectfully request consideration of newly added dependent claim 20 that further distinguishes applicant's invention. In particular, claim 20 recites that the system in claim 17 is configured such that the supervisory unit turns on the display device to display a message reflecting the received status information of an appliance based on the priority associated with the status information.

CONCLUSION

In view of the above amendments and remarks, Applicants submit that all pending claims are clearly allowable over the cited prior art, and respectfully request early and favorable notification to that effect. If the Examiner believes that a conference would be of value in expediting the prosecution of this application, the Examiner is invited to telephone the undersigned counsel to arrange for such a conference.

Respectfully submitted,

Dated: July 12, 2002

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APPENDIX A
VERSION WITH MARKINGS TO SHOW CHANGES MADE IN THE SPECIFICATION

On page 1; the heading starting at line 2 is amended as follows:

CROSS-REFERENCE TO [A] RELATED APPLICATIONS

On page 1; the paragraph starting at line 3 is amended and additional paragraphs added as follows:

The present application is copending with and entitled to the benefit of the filing date of provisional application No. [60/006,166] 60/174,964 filed 16 July 1997 and also entitled INTEGRATED UNITS WITH DIAGNOSTIC CAPABILITIES. This application is also related to and claims the benefit of the filing date of the following identified U.S. patent applications, which are incorporated herein by reference to the extent allowable by law:

U.S. Patent Application No. 09/046,947, entitled "Appliances With Internet Access," filed 23 March 1998, which claims the benefit of the following identified U.S. patent applications;

U.S. Patent Application No. 08/707,623, entitled "Educational and Training Devices and Methods," filed on 5 September 1996 and issued on 5 October 1999 as U.S. Patent No. 5,961,333;

U.S. Patent Application No. 08/641,911, entitled "Information Retrieval and Presentation Systems With Direct Access To Retrievable Items Of Information," filed on 2 May 1996 and issued on 12 March 1998 as U.S. Patent No. 5,751,369;

U.S. Patent Application No. 08/624,983, entitled "Operation of Information/ Entertainment Centers," filed on 29 March 1996 and issued on 9 June 1998 as U.S. Patent No.

5,764,304, which is a continuation-in-part of U.S. Application No. 08/569,310 filed 8 December 1995;

U.S. Patent Application No. 08/624,984, entitled "Data Storage Devices," filed on 29 March 1996 and issued on 1 September 1998 as U.S. Patent No. 5,801,784, which is a continuation-in-part of U.S. Application No. 08/569,310 filed 8 December 1995;

U.S. Patent Application No. 08/625,719, entitled "Methods of Producing Data Storage Devices for Appliances," filed on 29 March 1996 and issued on 27 April 1999 as U.S. Patent No. 5,898,462, which is a continuation-in-part of U.S. Application No. 08/569,310 filed 8 December 1995;

U.S. Patent Application No. 08/621,638, entitled "Systems In Which Information Can Be Retrieved From An Encoded Laser Readable Disc," filed on 3/26/96 and issued on 8 March 1998 as U.S. Patent No. 5,724,102, which is a divisional of U.S. Patent Application No. 08/569,310, filed 8 December 1995; and

U.S. Patent Application No. 08/569,310, entitled "Systems With A Remote Control In Which Information Can Be Retrieved From An Encoded Laser Readable Disc," filed 8 December 1995 and issued on 5 May 1998 as U.S. Patent No. 5,748,254, which is a continuation of U.S. Patent Application No. 08/505,969, filed Jul. 24, 1995, now abandoned.

On page 1; the paragraph starting at line 18 is amended as follows:

Heretofore, the above-identified copending applications have proposed [have been] information retrieval and display systems which include an integrated module having: (a) a player for an optically readable, encoded data storage device such as a video compact disc, an audio compact disc, a laser disc, or a digital video disc; (b) a player for retrieving data from the

disc; and (c) a screen on which the retrieved information can be displayed. Stored on the optically readable disc are data constituting instructions or other information sought by the user. In a kitchen setting this information may include, for example, video demonstrations of the steps involved in preparing a selected dish, recipe ingredient lists, and video demonstrations or information on the use and operation of utensils and appliances employed in preparing a selected item. In general, a host of information on cooking and other food preparation techniques, advice on stocking a pantry, and other kitchen-related subjects can be made available as well as information specific to a particular recipe including demonstrations of steps employed in preparing the item, ingredient lists, cooking times and temperatures, times for the accomplishing of other steps such as the marinating of meats, etc.

On page 5; the paragraph starting at line 21 is amended as follows:

The internal operating components of integrated unit 26, depicted schematically in FIG. 2, constitute an integrated operating system identified by reference character 56. These components include a CPU board 58 and input jacks which are collectively identified by reference character 60 and which are employed to connect integrated unit [24]26 to a television signal source -- a television antenna or cable and/or a VCR. A tuner 62 is employed by the user to select one of the available television channels to watch or the VCR channel (usually 3 or 4) at the user's location. The off-the-air or VCR signal is directed through an audio/video switch 64 to an audio/video generator 66. That system component converts the incoming signal to a video signal, which can be transformed into visual images by CRT 31. The visual images are displayed on the CRT screen 32 of television set 30. The incoming signal typically also includes

an audio component which is converted to audible sound by audio/video generator 66 and the illustrated stereo speaker system 68.

On page 10; the paragraph starting at line 7 is amended as follows:

In the kitchen range control schemata of FIGS. 6-8, a touch screen 130 overlies the CRT screen 32 of integrated unit 24. FIG. [4]6 shows a display 132 which a user of system 20 [can]is allowed by system 20 to bring up on the CRT screen 32 of integrated unit 26.

On page 10; the paragraph starting at line 10 is amended as follows:

Display 132 and touch screen 130 may be employed to turn on each of the burners 134 ...140 and oven 142 of kitchen range [80]24 and to set the temperature of the selected heating element with the arrangement employed to turn on a burner being representative. In particular, included in display 132 under the label COOKING TOP are four icons [142 ...148]144, 146, 148, and 150 of the range 24 shown in FIG. 3. The control icon 144 of right front burner 134 is [typical and]one implementation that is shown in more detail in FIGS. 7 and 8.

On page 18; the paragraph starting at line 17 is amended as follows:

Microprocessor 164 also transmits to the power line modem [82]86 in control box 80 information on the status of kitchen range 24, particularly information concerning the nature and seriousness of a problem with the appliance -- for example, a defective or burned-out heating element.

APPENDIX B
VERSION WITH MARKINGS TO SHOW CHANGES MADE IN CLAIMS

Claims 1-12 and 14-19 were amended as follows:

1. (Amended) [The combination of:] A system, comprising:

an appliance;

means for monitoring the performance of said appliance; and

means for transmitting data indicative of [the]a status of said appliance from said monitoring means to a facility physically [removed]remote from the appliance and the appliance monitoring means.

2. (Amended) [A combination as defined in]The system of claim 1 in which the means for monitoring said appliance comprises:

a data processing and storage means; and

means for transmitting data from said appliance to said data processing and storage means.

3. (Amended) [A combination as defined in]The system of claim 2 in which the means for transmitting data from said appliance to said data processing and storage means comprises a modem and means connecting said modem to a power line servicing said appliance.

4. (Amended) [A combination as defined in]The system of claim 1 in which the means for transmitting information from said data processing and storage means to said facility comprises a phone modem.

5. (Amended) [A combination as defined in]The system of claim 1 in which the means for monitoring the appliance comprises an integrated unit with multiple user-selectable modes of operation.

6. (Amended) [A combination as defined in]The system of claim 5 in which one of said user-selectable modes is a DIAGNOSTIC mode, said integrated unit having the capability with said integrated unit operating in the DIAGNOSTIC mode of displaying a message reporting the status of said appliance.

7. (Amended) [A combination as defined in]The system of claim 5 in which:

said integrated unit comprises a module comprising a player for a disc with laser readable data stored thereon;

said integrated unit being operative in one of said multiple modes of operation to read data from said disc and communicate the retrieved data to a person using said integrated unit.

8. (Amended) [A combination as defined in]The system of claim 5 in which said integrated unit has a screen and an INTERNET mode of operation in which a user-actuatable means is available to establish a connection to the Internet, said integrated unit having means [thereafter]for displaying information obtained from an Internet site on said screen.

9. (Amended) [A combination as defined in]The system of claim 5:

in which said integrated unit comprises a television with a screen;

said [combination]system further comprising a user-actuatable means for selecting operation of said system in a television viewing mode.

10. (Amended) [A combination as defined in]The system of claim 5 which comprises a remote control for selecting an operation mode of said integrated unit, said remote control having a separate, dedicated control for selecting each operating mode of said appliance.

11. (Amended) [A combination as defined in]The system of claim 5 in which said integrated unit is so constructed that, when operation of said unit is switched from one of said

modes to a different mode, operation of said integrated unit in said one mode will resume at the port where operation of the integrated unit in said one mode was interrupted.

12. (Amended) [The combination of:]A system, comprising:

an appliance; and

an integrated unit for monitoring said appliance, said integrated unit comprising a screen;

said integrated unit having an operating system with the capability of powering up said integrated unit to display a message on said screen if a fault arises in said appliance.

14. (Amended) [The combination of:]A system, comprising

an appliance; and

an integrated unit for monitoring said appliance;

said integrated unit having a screen and an operating system capable of causing a display message indicative of a fault in said appliance being displayed on said screen when said integrated unit is powered up.

15. (Amended) [The combination of:]A system, comprising:

an appliance; and

a monitoring unit [for monitoring the performance of]operably connected to said appliance[;], said appliance comprising a sensor for monitoring a parameter indicative of the performance of [the] said appliance; [and]

said [combination for the]monitoring unit comprising:

means for sampling the [data]parameter available from said sensor at periodic intervals;

means for storing said [data]parameter [in memory]in said monitoring unit; and

means for comparing the stored [data]parameter with reference data [and thus identifying the nature of the]such that a problem associated with the appliance is identified if said appliance fails.

16. (Amended) [A combination as defined in]The system of claim 15 in which said [data]parameter is stored in a FIFO file, [the] oldest data being replaced with [the]newest data after the file is filled.

17. (Amended) A system comprises:

a supervisory unit; and

means for transmitting to said supervisory unit status information on an appliance associated with said supervisory unit;

said supervisory unit comprising a screen and an operating system for displaying on said screen a message reflecting the status information of said appliance.

18. (Amended) [A]The system [as defined in]of claim 17 in which:

said supervisory unit comprises an electrically powered display device in which said screen is incorporated and means for turning said display device on and off; and

the operating system of said supervisory unit [has the capability of turning]is perably configured to turn said display device on and to display[ing] said message if the [message]status information is received when said display device is turned off.

19. (Amended) [A]The system [as defined in]of claim 17 in which:

the operating system of said supervisory unit comprises an electrically operated display device in which said screen is incorporated; and the operating system of said supervisory unit [has the capability of]is operably configured to display[ing] said message[s] [only: (a) if said message

display device is turned on when the message is received, or (b)] when said display device is subsequently turned on if said [message]status information is received when the display device is turned off.

Please enter the following new Claim 20:

20. (New) The system of claim 17, wherein:

the operating system of said supervisory unit comprises an electrically operated display device in which said screen is incorporated;

said status information has an associated priority; and

the operating system of said supervisory unit is operably configured to turn on said display device and to display said message based on said associated priority having a predetermined value.